

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants	:	Schwartz et al
Title	:	Computer-Based Patient Record Management ...
Application No.	:	10/070,981
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Confirmation No.	:	4846
Examiner	:	Dilek B. Cobanoglu
Group Art Unit	:	3626
Attorney Docket	:	214255605002

**APPEAL BRIEF**

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Mail Stop Appeal Brief – Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

This Appeal Brief is filed in response to the final Office Action mailed January 23, 2008 and pursuant to a Notice of Appeal filed June 23, 2008. Any fees due for this Appeal Brief should be withdrawn from the Jones Day Deposit Account No. 501432, reference 214255605002.

## **I. REAL PARTIES IN INTEREST**

The real party in interest is Noteworthy Medical Systems, Inc., as evidenced by an assignment recorded at Reel/Frame 014942/0484.

## **II. RELATED APPEALS AND INTERFERENCES**

There is no related appeal or interference to this application.

## **III. STATUS OF CLAIMS**

Claims 1-21, 23-24, 28-34, 36, 44-45, 49 and 52 are cancelled. Claims 22, 25-27, 35, 37-43, 46-48, 50-51 and 53-54 are pending. The rejections of claims 22, 25, 27 and 35 are hereby appealed. The rejections of claims 26, 37-43, 46-48, 50-51 and 53-54 stand or fall with the rejection of claims 22 and 35, from which these claims depend.

## **IV. STATUS OF AMENDMENTS**

No amendment was filed after the final rejection.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

### **A. Independent Claim 22**

Independent claim 22 recites a computer implemented medical record system. The system includes a display 10, 40 (p. 10, line 8; p.11, line 4) and a processor. A memory (p.5, line 15) for storing computer readable instructions that cause the processor to render a graphical user interface (p.5, lines 1-11) on the display for inputting data into the medical record system.

The graphical user interface including first, second and third data entry screens for documenting a patient encounter and for inputting data into a patient chart stored in the medical record system. Three data entry screens are organized into a subjective, objective, assessment, and plan (SOAP) format. (p.9, lines 12-20) The graphical user interface further consists of a reason for visit data entry field 84 (p.12, line 11) for receiving a selection of a patient's primary reason for visiting a medical service provider operating the medical record system.

The first screen 50, 52 (p.11, line 18 to p.13, line 13; Figs. 4-7) is operative to accept data input relating to summary data. The summary data includes patient vital signs, patient complaint, patient allergies, patient medications, and patient problem data.

The second screen 53, 110 (p.14, line 18 to p.20, line 28; Figs. 8-17) is operative to accept data input relating to patient history and physical examination data. The selection received in the reason for visit data entry field causes the processor to automatically select a visit outline from a plurality of visit outlines stored in the memory. (p.14, lines 25-28; p.15, lines 1-13) The automatically selected visit outline is related to the reason for the patient's visit and to present the visit outline in the second screen. The visit outline guides the examination by the medical service provider and listing the types of information that should be collected and recorded into the medical record system. (p.15, lines 1-13) The presented visit outline includes

an item column 112 listing information that should be collected by the medical service provider in relation to the selected primary reason for the patient's visit and a value column 114 (p.15, line 13) that lists the type or format of the collected information. The system dynamically modifies (p.17, lines 16-26) the presentation of the information set forth in the item column of the visit outline in response to a user making a selection from a pre-defined set of choices presented in the value column of the visit outline.

The third screen 54, 180 (p.21, lines 1-21; Fig. 18) accepts data input relating to order entry data. The order entry data is determined by a user of the system by referencing the summary data and the history and physical examination data.

B. Independent Claim 35

Independent claim 35 recites a method of managing patient medical treatment data. One step of the method is displaying a graphical user interface including first, second and third data entry screens 10, 40 (p. 10, line 8; p.11, line 4) for documenting a patient encounter and for inputting data into a patient chart stored in a medical record system. The three data entry screens are organized into a subjective, objective, assessment, and plan (SOAP) format (p.9, lines 12-20).

Another step is accepting data in the first screen 50, 52 (p.11, line 18 to p.13, line 13; Figs. 4-7) relating to summary data. The summary data include patient vital signs, patient complaint, patient allergies, patient medications, and patient problem data.

Another step includes accepting data in the second screen (p.14, line 18 to p.20, line 28; Figs. 8-17) relating to patient history and physical examination data. The second screen is configured by a stored visit outline that is automatically selected from a plurality of stored visit outlines (p.14, lines 25-28; p.15, lines 1-13) by the medical record system in response to the user

selection of a particular reason for the patient's visit to a medical service provider operating the medical record system. The visit outline guides the examination by the medical service provider and lists the types of information that should be collected and recorded into the medical record system. (p.15, lines 1-13) The presented visit outline includes an item column 112 that lists information that should be collected by the medical service provider in relation to the selected primary reason for the patient's visit and a value column 114 (p.15, line 13) that lists the type or format of the collected information. The system dynamically modifies (p.17, lines 16-26) the presentation of the information set forth in the item column of the visit outline in response to a user making a selection from a pre-defined set of choices presented in the value column of the visit outline.

Another step includes accepting data in the third screen 54, 180 (p.21, lines 1-21; Fig. 18) relating to order entry data. The order entry data is determined by a user of the system by referencing the summary data and the history and physical examination data.

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

A. Whether claims 22 and 35 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Lavin (U.S. Patent No. 5,772,585) in view of Campbell (U.S. Patent No. 6,047,259) and further in view of Simborg (U.S. Patent No. 5,950,168).

B. Whether claim 25 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Lavin (U.S. Patent No. 5,772,585) in view of Campbell (U.S. Patent No. 6,047,259) and further in view of Simborg (U.S. Patent No. 5,950,168).

C. Whether claim 27 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Lavin (U.S. Patent No. 5,772,585) in view of Campbell (U.S. Patent No. 6,047,259) and further in view of Simborg (U.S. Patent No. 5,950,168).

## VII. ARGUMENT

### A. Independent Claims 22 and 35 Are Not *Prima Facie* Obvious Over the Cited References to Lavin, Campbell and Simborg

#### 1. The Cited References Fail to Disclose or Suggest Automatically Selecting a Visit Outline

Independent claim 22 requires that the graphical user interface presented by the medical record system includes “*a reason for visit data entry field for receiving a selection of a patient’s primary reason for a visit,*” and further requires that the system processor “*automatically selects a visit outline from a plurality of visit outlines stored in the memory, the automatically selected visit outline being related to the reason for the patient’s visit.*” These required claim limitations are not present in any of the cited references to Lavin, Campbell or Simborg.

An example of the claimed “*reason for visit data entry field*” is shown in Figure 7 of the present application, as item 84. (*See, below*)

Fig. 7

52 53 54 84

Patient Chart - LISA/Mona

SUMMARY No and PE Order Entry Reasons for Visit: Chest Pain Add...

LISA, Mona

70

50

72

74

88

64

56

24

58

26

60

66

62

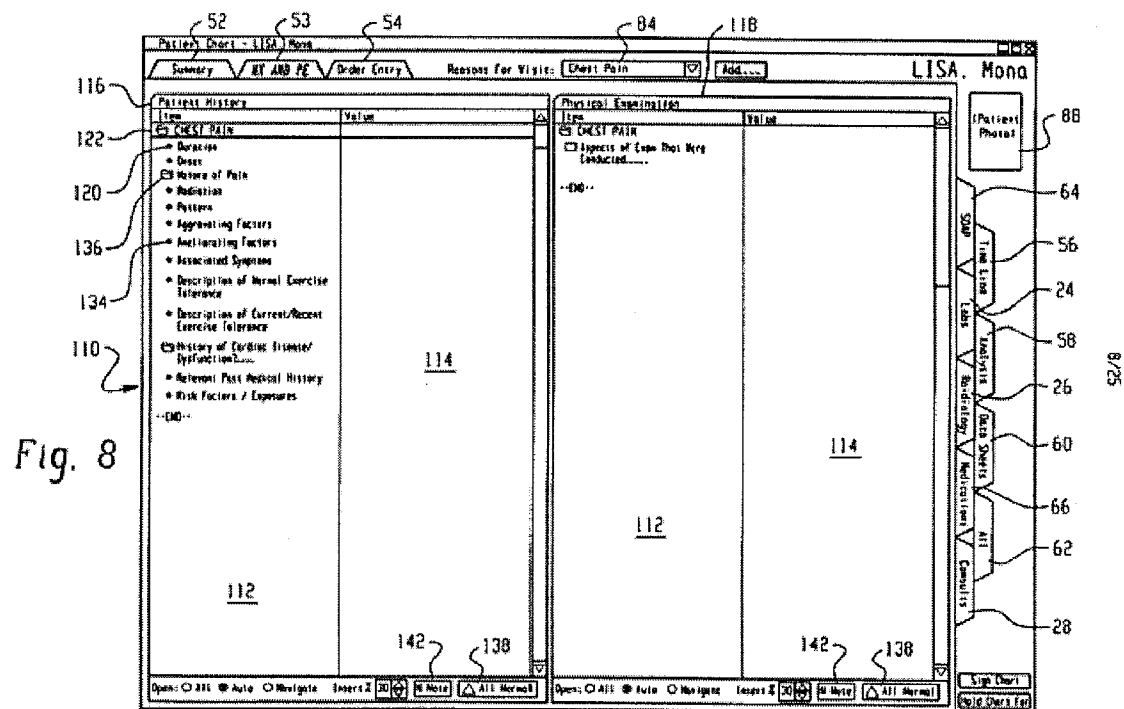
28

82

80

76

The “*reason for visit data entry field*” (item 84) shown in Figure 7 (above) is a drop down box that allows the medical service provider to select a primary reason for the patient’s visit. The selections presented by this data entry field are linked, by the system processor, to a plurality of stored visit outlines that assist the medical service provider by guiding the examination and by listing the specific types of information that should be collected and recorded into the medical record system *in relation to the reason for the patient’s visit*. In the example of Figure 7, the selection of “chest pain” from the data entry field causes the system processor to automatically select and display the stored visit outline related to this problem – chest pain. For example, as shown in Figure 8 of this application, below, the selection of “chest pain” as the primary reason for the visit has automatically triggered the “chest pain” visit outline in the patient history and physical examination screen.



If the medical service provider had selected a different reason for the patient's visit in the reason for visit data entry field (84), such as "Ear Pain," then the system would have automatically selected a different stored visit outline to guide the examination from among the plurality of visit outlines stored in the system memory. In this manner, the primary reason for the patient's visit is able to trigger the automatic selection of an appropriate visit outline that is then utilized by the medical service provider to efficiently and effectively guide the patient encounter.

The Final Office Action admits that Lavin does not disclose these claim limitations. (See, Final Office Action at page 5, "Lavin fails to expressly teach the selection received in the reason for visit data entry field automatically selects a visit outline related to the reason for the patient's visit. . .") Furthermore, no attempt is made in the Final Office Action to show where these claim limitations are present in Simborg. Thus, in order for the obviousness rejection to stand, the required claim limitations must be present in Campbell. They are not.



Although the Final Office Action refers to the following portions of Campbell in support of the allegation that these claim limitations are disclosed: (i) abstract of Campbell; (ii) col. 1, line 64 to col. 2, line 8; (iii) col. 2, lines 14-21; and (iv) col. 13, lines 10-18, the fact remains that Campbell does not disclose a system which automatically selects a visit outline from a plurality of stored visit outlines in relation to the selected primary reason for the patient's visit, as required by independent claim 22. Each of the relied-upon portions of Campbell will now be addressed in detail in order to prove that this reference does not disclose the claim limitations at issue.

Turning first to Campbell's Abstract, set forth below, this portion of the reference refers to "physical exam software," and a "list of possible diagnosis," and "selecting a treatment protocol," but it does not disclose or suggest a system having a plurality of visit outlines nor does it disclose or suggest that the visit outlines are automatically selected based upon user input to a reason for visit data entry field.

[57]

#### ABSTRACT

A software system for managing a health care practice includes interactive software tools for conducting a physical exam, suggesting tentative diagnosis, and managing a treatment protocol. The physical exam software guides the user through a physical exam, prompting the user for input and dynamically generating context sensitive questions based on prior input. The diagnosis software generates a list of possible diagnoses based on the observations recorded from the physical exam. The user can interactively select a diagnosis by selecting a diagnosis from a rule out list and watching the display as the system dynamic updates the status of unresolved symptoms. The user can also select a treatment protocol, which is integrated with future physical exams. The treatment protocol is integrated such that future exam sessions reflect the status of the treatment protocol and remind the user which services need to be performed and when they should be performed.

In fact, the Abstract of Campbell (immediately above) tends to indicate that there is only one programmed type of physical exam as distinguished from the "*plurality of*" visit outlines that are programmed into the claimed system and which are automatically selected based upon the

primary reason for the patient's visit. Although Campbell's approach may be appropriate for a general physical examination in which there is *no particular reason* for the patient's visit, it is inefficient and time-consuming when the patient has come to the medical service provider with a specific problem, such as chest pain. Thus, the Abstract of Campbell does not disclose the required claim language.

Column 1, line 64 through column 2, line 8 of Campbell, set forth below, discusses an "interactive user interface screen for conducting an interactive medical exam," and also discusses a "treatment protocol" that can be selected by a doctor "such that future interactive exam sessions display reminders to perform services in the protocol."

When installed in a medical office or hospital, the system software of the invention can be executed in a network configuration or in a stand-alone computer. The system software displays interactive user interface screens for conducting an interactive medical exam, generating diagnoses of abnormal observations, and managing a treatment proto-

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col. The treatment protocol can be integrated with the interactive medical exam component of the system. For example, the doctor can select a treatment protocol from a user interface displaying computer generated diagnoses. In response, the system schedules the treatment protocol such that future interactive exam sessions display reminders to perform services in the protocol, and prompt the user to make observations related to the selected diagnoses. Once

*(Campbell, col. 1, line 64 to col. 2, line 8)*

There is nothing in this portion of Campbell, however, which discloses or suggests a plurality of visit outlines that are automatically selected by the system in relation to the reason for a patient's visit. It is clearly missing any notion of this teaching from claim 22.

Column 2, lines 14-21 of Campbell, set forth below, discuss the examination screens displayed in his general physical examination, stating that these screens “guide the user through a complete medical exam,” and also that these screens display “predetermined observations and enable the user to select among the observations to record abnormal findings.”

The interactive medical exam component of the system  
15 displays physical exam screens that guide the user through  
a complete medical exam. The screens display predetermined  
observations and enable the user to select among the  
observations to record abnormal findings. The system  
dynamically updates the patient’s record and evaluates the  
20 input to generate additional context sensitive prompts to  
record additional observations.

*(Campbell, col. 2, lines 14-21)*

Here, Campbell is actually *teaching away* from the presently-claimed invention by stating that his screens “**guide the user through a complete medical exam**,” (emphasis supplied) which as noted above would be very inefficient and time consuming where the patient has come to see the doctor for a particular problem, such as chest pain. There is simply nothing in this portion of Campbell that would disclose or suggest a plurality of stored visit outlines that are automatically selected by the system in relation to the reason for the patient’s visit. To the contrary, in fact, this portion of Campbell teaches a single, general set of “predetermined observations” that relate to “a complete medical exam.” This is the *antithesis* of the invention set forth in independent claim 22.

And finally column 13, lines 10-18 of Campbell, set forth below, describe a series of “buttons” that a user can operate to manually select to display a portion of the general physical examination.

When the user clicks on any of these buttons, the system 10  
launches a new screen for the selected part of the physical  
exam. The interactive exam screens guide the user through  
the physical exam. As user enters information (by clicking  
on buttons or entering text), the server dynamically updates  
the database and evaluates the data to determine whether to 15  
prompt the user for additional information by displaying  
questions and supplemental screens that prompt the user to  
input medical observations.

*(Campbell, col. 13, lines 10-18)*

Figure 4 of Campbell shows this manual selection of the various portions of the physical exam. When a user “selects” a button (420 in Figure 4), the system then brings up a predetermined physical exam screen (Figure 5) in response to the user-selected portion of the overall physical exam. This single, predetermined physical examination screen is broken down into a number of areas, such as “Overall Condition,” “Coat and Skin,” “Ocular,” etc. The user of Campbell’s system has to manually select one or more of these areas in order to be presented with a completely separate examination “screen” (Figure 5) that is used to collect information regarding the selected portion of the examination: *“The physical exam buttons represent the top level in a hierarchy of physical exam screens. The physical exam is broken into the following areas: 1) Overall Condition. . . 12) Behavioral. When the user clicks on any of these buttons, the system launches a new screen. . . “* (Campbell at col. 12, line 59 to col. 13, line 11)

Missing from this portion of Campbell, however, is any disclosure or suggestion of automatically selecting a specific visit outline that has been customized to guide the examination by the medical service provider in relation to the reason for visit input to the system. In Campbell, the examination screens are generic and unrelated to the reasons for the patient’s visit, whereas in the system disclosed and claimed in claim 22, the visit outlines are specific to the

reason for the patient's visit and are designed to efficiently and effectively gather only the pertinent information relevant to that reason.

In summary, the Campbell reference fails to disclose or suggest a plurality of visit outlines, but rather teaches a single physical examination broken down into a number of areas. Moreover, Campbell fails to disclose or suggest automatically selecting one of the plurality of stored visit outlines in response to a selection of the primary reason for the patient's visit, but rather teaches that the user must manually select a sub-set of the single physical examination process. Because these claim limitations are clearly missing from Campbell, and admittedly missing from Lavin and Simborg, the obviousness rejection of claim 22 is in error and must be withdrawn.

2. The Cited References Fail to Disclose or Suggest  
Dynamically Modifying a Visit Outline

Independent claim 22 also recites the function of “*dynamically modifying the presentation of the information set forth in the item column of the visit outline in response to a user making a selection from a pre-defined set of choices presented in the value column of the visit outline.*” The visit outline described in claim 22 includes “*an item column listing information that should be collected by the medical service provided in relation to the selected primary reason for the patient's visit and a value column that lists the type or format of the collected information.*”

In the presently-claimed invention, a “visit outline” is a data entry item that both guides the examination by listing the information that should be collected, and serves as a template for how the information should be recorded. (See, specification at 15) Moreover, as set forth in claim 22, the claimed visit outline is also *dynamic* in that the information to be collected in the

*“item column listing”* changes depending upon user selections presented in the *“value column.”*

This teaching is clearly missing from the cited references.

The Final Office Action makes no attempt to show where such a “dynamically modifiable” visit outline is disclosed in either Lavin or Campbell, and thus the claim language must be met by the disclosure of Simborg in order for the obviousness rejection to stand. The Final Office Action refers to the following portions of Simborg in support of the allegation that this teaching is present: (i) col. 2, line 63 to col. 3, line 13; (ii) col. 4, lines 18-29 and 54-63; and (iii) col. 5, lines 44-61 and Figure 4. Although Simborg appears to show something similar to an “item column” and a “value column,” it does not disclose a “visit outline” as claimed, nor is there any evidence of record that would support the conclusion that Simborg’s display is *“dynamically modifiable. . . in response to a user making a selection from a pre-defined set of choices presented in the value column of the visit outline”* as required by claim 22. Each of the relied-upon portions of Simborg will now be addressed in detail in order to prove that this reference does not disclose the claim limitations at issue.

Turning first to col. 2, line 63 to col. 3, line 13 of Simborg, set forth below, this portion of the reference discloses a hierarchical “outline” having a category column and an item column.

FIG. 1 is a first example of a display **10** which is part of a user interface according to the present invention. A user  
65 views display **10** and can interact with display **10** by positioning a cursor **12** over a display element or by using a keyboard, as is well known in the art. Display **10** is divided

into several sections, such as a category column **14**, an item column **16** and one or more observation columns **18**. Each category in category column **14** has a category label **20** identifying the category and each data item in item column **16** has an item label **22** identifying the data item. The data items are organized under each category into a hierarchical, or outline, structure with some data items being parent items and some data items being child items. For example, in FIG. 1, “Asthma” is one of the data items in the category “Problem”. “Asthma” is the parent term to the children data items “Lungs” and “Heart”. “Lungs” in turn, is the parent to its children “Wheezes” and “DOE”. Each observation column **18** has a value box associated with each data item although some might be blank or unused.

*(Simborg, col. 2, line 63 to col. 3, line 13)*

Although this portion of Simborg teaches a display having a category column and an item column, there is nothing in this portion of the reference that refers to this display screen as being dynamically modifiable. In addition, there is nothing in this portion of the reference that would disclose or suggest that data input to the item column causes any modification of the information displayed in the category column. Thus, this portion of Simborg fails to disclose or suggest the claimed subject matter.

Column 4, lines 18-29 and 54-63, set forth below, discloses a process whereby a user can manually add items to the outline by clicking certain buttons.

Within each observation column **18** are the observation values, such as observation value **30** in FIG. 1, corresponding to the data item label for that row. For example, FIG. 1 shows that during an encounter on Apr. 22, 1996, the patient had a blood pressure of 130/85. Not all data items need have values for each encounter.

Data items can be added to the existing data items by selection using item buttons **32** shown in FIG. 1. Clicking on an item button **32** provides the user with a list of items for the selected category which can be added. The "Problem" category contains data items relating to diagnoses, symptoms, signs, and the like. The "Procedure" category contains data items relating to laboratory tests, X-rays and other procedures. The "Therapy" category contains data items relating to medications, diets and the like. For longer notes such as discharge summaries, history and physicals, operative reports and the like, the "Text Note" category is used.

A "KnowMed" is a term used to describe a medical knowbot. A "knowbot" is a "knowledge robot" or software agent which can be "trained" or configured to filter large amounts of available data and present only data considered relevant to an individual user. Thus, a KnowMed is a software agent acting on behalf of a user to determine which data from among the large EMR database of a patient should be displayed and in what format. Of course, depending on its training, the KnowMed might also be acting on behalf of the organization to which the user belongs as well.

(Simborg, col. 4, ll. 18-29 and 54-63)

Here again, like the first portion of Simborg relied upon above, there is nothing about the "outline" being dynamically modifiable *in response to* a user making a selection from a pre-defined set of choices presented in the value column of the visit outline. Rather, in this portion of Simborg, the outline is modified by a user manually adding categories to the outline. Column 4, lines 54-63 refers to something called a "KnowMed," nothing more.



And finally, column 5, lines 44-61 of Simborg, set forth below, discloses further information about a particular “KnowMed” that presents additional categories that may be added to the outline based on prior patient encounters.

FIG. 4 shows an example of a New Problem KnowMed for the Angina Pectoris. The data items in the Verify category are those which the user has most often added to other patients’ records when adding a new diagnosis of Angina Pectoris. The question marks (?) next to each item are to indicate that the user must select each item that s/he wishes to enter into this patient’s record. This is done by clicking on the item. The zipped state, hierarchical location, show/hide tag, etc. of these additional items are also determined by the New Problem KnowMed.

The content and format of the data items displayed in the Verify category are determined by the New Problem KnowMed in a similar fashion to the Chartview KnowMed. Its logic tabulates the data items and their formats which were added to the record on the previous occasions when the user added the triggering diagnosis, symptom or sign. Again, the modal behavior will be used unless overridden by an empirical rule.

*(Simborg, col. 5, ll. 44-61)*

Here again, however, nothing in the cited portions of the Simborg reference discloses a dynamically modifiable visit outline that responds to a user making a selection from a pre-defined set of choices presented in the value column of the visit outline.

Therefore, because these additional claim limitations are clearly missing from Simborg, the obviousness rejection of claim 22 is in error and must be withdrawn.

Independent claim 35 includes similar limitations to those argued herein with respect to claim 22, and therefore this claim is likewise distinguishable from the cited references.

B. Dependent Claim 25 is Not *Prima Facie* Obvious  
Over the Cited References to Lavin, Campbell and Simborg

Dependent claim 25 depends from claim 22 and adds the limitation of “*a carepath module linked to the selected visit outline for suggesting a particular medical treatment in response to the data input in the first, second and third screens into the patient’s chart, the carepath module automatically determining that additional data entry is required to evaluate the patient’s condition in order to make a suggestion and prompting the user of the medical record system to input the additional data.*” This additional limitation to the claims is missing from the cited references.

The Final Office Action admits that the primary reference to Lavin “*fails to expressly teach a carepath module linked to the selected visit outline for suggesting a particular medical treatment,*” and also admits that Lavin “*fails to expressly teach the carepath module automatically determining that additional data entry is required to evaluate the patient’s condition,*” as required by claim 25. Making up for this missing teaching, the Final Office Action turns to Campbell and Simborg, in combination. The portions of these references relied upon for this additional claimed subject matter, however, simply do not disclose or suggest the subject matter of this dependent claim.

First, the Final Office Action erroneously refers to the Abstract, col. 1, line 64 to col. 2, line 8, col. 2, lines 14-21 and col. 13, lines 10-18 of Campbell as allegedly teaching the claimed “carepath module.” These portions of Campbell, however, refer to a “treatment protocol” which is displayed to the medical service provider. This appears to be a simple look-up table type of implementation that does not provide any logic or intelligence built into the carepath. In the carepath module described in claim 25, for example, the suggestion of a particular medical treatment is made *in response to the data input to the first, second and third data entry screens,*

and, moreover, the carepath module is smart enough to determine that additional data is required in order to make a suggested treatment and thereafter automatically prompts the user to enter the needed data. In Campbell, by distinction, the “treatment protocol” must be manually selected by the medical service provider, it is not “**linked to**” a selected visit outline as required by claim 25, nor does it make suggestions based upon the data input to the system, nor does it automatically prompt the user to enter needed data suggest a treatment: “*The doctor can then launch a protocol by clicking on the protocol button. In response, the client sends a message to the server, which changes the status of the diagnosis to Undergoing therapy. . . To generate a protocol the server looks up the protocol in a protocol table using the selected diagnosis as a key.*” (Campbell, col. 17, lines 32-40) As demonstrated by this portion of Campbell, which is not referenced in the rejection, the “protocol” is manually selected by the doctor, and it is not linked to any visit outline but instead appears to be linked to a tentative diagnosis. Thus, Campbell does not disclose or suggest the functionality set forth in claim 25.

Apparently recognizing this shortcoming of Campbell’s disclosure, the Final Office Action also refers to the same portions of Simborg set forth above in detail that were used in respect of the rejection of claim 22. Specifically, the Final Office Action alleges that these portions of Simborg (col. 2, line 63 to col. 3, line 13; col. 4, lines 18-29 and 54-63; col. 5, lines 44-61; all of which are presented above) disclose a carepath module that automatically determines that additional data entry is required to evaluate the patient’s condition in order to make a suggestions and prompting the user of the medical record system to input the additional data. This is clearly wrong. The portions of Simborg relied upon in rejecting claim 25 do not even relate to a carepath, let alone one that is linked to a visit outline. Moreover, there is no teaching or suggestion in these portions of Simborg where the carepath module automatically

determines that additional data entry is required and prompting the user to input the additional data. Instead, as shown above, the user of the Simborg system must manually add categories to the outline.

Therefore, because these additional claim limitations are clearly missing from the cited references the obviousness rejection of claim 25 is in error and must be withdrawn.

C. Dependent Claim 27 is Not *Prima Facie* Obvious  
Over the Cited References to Lavin, Campbell and Simborg

Dependent claim 27 depends from claim 22 and adds the limitation of “*a data repository including genogrammatical data, wherein the system graphically maintains the patient’s family medical history in a genogram.*” This additional limitation to the claims is missing from the cited references.

The Final Office Action points to column 7, line 62 through column 8, line 8 of Lavin in finding that this additional claim limitation is met. This portion of Lavin is describing Figure 10 of the Lavin patent, which provides a graphical user interface for entering family medical history into Lavin’s system. Here, a user of Lavin’s system can enter family members by name, relationship and also list the types of medical conditions for those family members. What is clearly missing from Lavin, however, is any mention of graphically maintaining the patient’s family medical history *in a genogram* as recited in claim 27.

A genogram is a graphic representation of a family tree that displays detailed data on the relationships among individuals in the family tree. (See, [www.genopro.com/genogram/](http://www.genopro.com/genogram/) for this definition of a genogram.) Further information regarding the content and structure of a typical genogram can be found at [www.wikipedia.org/genogram/](http://www.wikipedia.org/genogram/). Here, it is explained that a genogram goes beyond a traditional family tree by allowing the user to visualize hereditary patterns and psychological factors that punctuate relationships. Moreover, a genogram can be used to identify

repetitive patterns of behavior and to recognize hereditary tendencies. (See, [www.wikipedia.org/genogram/](http://www.wikipedia.org/genogram/)).

There is no disclosure of a genogram in Lavin. Figure 10 of Lavin, as noted previously, is simply a data entry screen, it is not a genogram. Therefore Lavin does not disclose the subject matter of claim 27, which requires that *the system graphically maintains the patient's family medical history in a genogram*. Because these additional claim limitations are clearly missing from the cited references the obviousness rejection of claim 27 is in error and must be withdrawn.

#### **VIII. CLAIMS APPENDIX**

A Claims Appendix setting forth the claims involved in this appeal are attached.

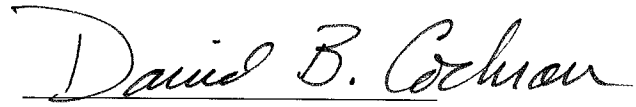
#### **IX. EVIDENCE APPENDIX**

No evidence is being submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132, nor is there any other evidence entered by the Examiner or relied upon by the Applicant. An Evidence Appendix indicating "None" is attached.

#### **X. RELATED PROCEEDINGS APPENDIX**

There are no proceedings relating to this application. A Related Proceedings Appendix indicating "None" is attached.

Respectfully submitted,

A handwritten signature in cursive script that reads "David B. Cochran". The signature is written in black ink and is positioned above a horizontal line.

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## **CLAIMS APPENDIX**

1-21. (Cancelled)

22. (Previously Presented) A computer implemented medical record system, comprising:

a display;

a processor; and

a memory for storing computer readable instructions that cause the processor to render a graphical user interface on the display for inputting data into the medical record system;

the graphical user interface including first, second and third data entry screens for documenting a patient encounter and for inputting data into a patient chart stored in the medical record system, wherein the three data entry screens are organized into a subjective, objective, assessment, and plan (SOAP) format, the graphical user interface further consisting of a reason for visit data entry field for receiving a selection of a patient's primary reason for visiting a medical service provider operating the medical record system;

the first screen being operative to accept data input relating to summary data, the summary data including patient vital signs, patient complaint, patient allergies, patient medications, and patient problem data;

the second screen being operative to accept data input relating to patient history and physical examination data, wherein the selection received in the reason for visit data entry field causes the processor to automatically select a visit outline from a plurality of visit outlines stored in the memory, the automatically selected visit outline being related to the reason for the

patient's visit and to present the visit outline in the second screen, the visit outline guiding the examination by the medical service provider and listing the types of information that should be collected and recorded into the medical record system, wherein the presented visit outline includes an item column listing information that should be collected by the medical service provider in relation to the selected primary reason for the patient's visit and a value column that lists the type or format of the collected information, and wherein the system dynamically modifies the presentation of the information set forth in the item column of the visit outline in response to a user making a selection from a pre-defined set of choices presented in the value column of the visit outline; and

the third screen being operative to accept data input relating to order entry data, the order entry data being determined by a user of the system by referencing the summary data and the history and physical examination data.

23-24. (Cancelled)

25. (Previously Presented) The system of claim 22, further comprising a carepath module linked to the selected visit outline for suggesting a particular medical treatment in response to the data input in the first, second and third screens into the patient's chart, the carepath module automatically determining that additional data entry is required to evaluate the patient's condition in order to make a suggestion and prompting the user of the medical record system to input the additional data.



26. (Previously Presented) The system of claim 22, wherein the graphical user interface further includes a plurality of picklists coupled to the selected visit outline for entering data into the medical record system, the picklists including a plurality of data entry choices programmed into the system that are responsive to a particular item of information to be collected by the medical service provider.

27. (Previously Presented) The system of claim 22, further comprising a data repository including genogramatical data, wherein the system graphically maintains the patient's family medical history in a genogram.

28-34 (Cancelled)

35. (Previously Presented) A method of managing patient medical treatment data, comprising:

displaying a graphical user interface including first, second and third data entry screens for documenting a patient encounter and for inputting data into a patient chart stored in a medical record system, wherein the three data entry screens are organized into a subjective, objective, assessment, and plan (SOAP) format;

accepting data in the first screen relating to summary data, the summary data including patient vital signs, patient complaint, patient allergies, patient medications, and patient problem data;

accepting data in the second screen relating to patient history and physical examination data, wherein the second screen is configured by a stored visit outline that is automatically selected from a plurality of stored visit outlines by the medical record system in response to the

user selection of a particular reason for the patient's visit to a medical service provider operating the medical record system, the visit outline guiding the examination by the medical service provider and listing the types of information that should be collected and recorded into the medical record system, wherein the presented visit outline includes an item column listing information that should be collected by the medical service provider in relation to the selected primary reason for the patient's visit and a value column that lists the type or format of the collected information, and wherein the system dynamically modifies the presentation of the information set forth in the item column of the visit outline in response to a user making a selection from a pre-defined set of choices presented in the value column of the visit outline; and

accepting data in the third screen relating to order entry data, the order entry data being determined by a user of the system by referencing the summary data and the history and physical examination data.

36. (Cancelled)

37. (Previously Presented) The system of claim 22, further comprising a medication pop-up tool accessible from the third screen facilitating entry of medication orders.

38. (Previously Presented) The system of claim 37, wherein the pop-up tool presents a list of available medications for selection by a user.

39. (Previously Presented) The system of claim 38, wherein the pop-up tool enables the user of the system to record the history of a selected medication.

40. (Previously Presented) The system of claim 38, wherein the pop-up tool prompts the user to input data for a new medication.

41. (Previously Presented) The system of claim 38, wherein the pop-up tool presents a calculator tool to calculate medication dosage or receive other medication guidelines in response to a user input.

42. (Previously Presented) The system of claim 41, wherein the calculator pre-populates fields by drawing previously entered data into outlines presented on the first and second screens.

43. (Previously Presented) The system of claim 22, further comprising add-on notations that can be attached to any element of a visit outline displayed on the second screen to accommodate data entry regarding exceptional situations that are not specifically addressed in the visit outline.

44-45. (Cancelled)

46. (Previously Presented) The system of claim 37, further comprising a pop-up tool for data entry, the pop-up tool facilitating the annotation of a graphical image using text, drawing tools, or both.

47. (Previously Presented) The system of claim 37, wherein the system enables a user to mark locations on a graphical image of a body system.

48. (Previously Presented) The system of claim 37, wherein the system enables a user to identify a body region by marking a location on a graphical image of a body system.

49. (Cancelled)

50. (Previously Presented) The system of claim 22, wherein the system is capable of dynamically modifying the on-screen presentation of a visit outline in response to the user of the system marking a location on a graphical image of a body system.

51. (Previously Presented) The medical record system of claim 22, wherein the three data entry screens are selected by three tabs located on a top portion of the user interface, and a plurality of data viewing screens are selected by a plurality of tabs located on a side portion of the graphical user interface.

52. (Cancelled)

53. (Previously Presented) The system of claim 26, wherein the picklist choices are initially set to a normal condition.

54. (Previously Presented) The system of claim 53, further comprising an all normal structure for selecting the normal condition for each choice presented through a picklist.

## **EVIDENCE APPENDIX**

NONE

**RELATED PROCEEDINGS APPENDIX**

NONE